

Bluestem Prairie Open Space

Preliminary Management Strategies

Draft – November 2, 2015

This summary is based on high-profile or high-priority issues identified in the initial field reviews and public input.

Vegetation

- Complete comprehensive noxious weed inventory and mapping on an annual basis
- Complete and implement a noxious weed management plan, including specific treatment timing approaches (e.g., chemical, mechanical, or biological), strategies, and costs
- Identify areas of concern with noxious weeds on adjacent properties
- Consider mowing grassland patches to manage annual weed establishment
- Concentrate immediate noxious weed management efforts:
 - Along the existing trail
 - Adjacent to trailhead
 - Along fence lines with Big Johnson Reservoir
 - Within the former agricultural building envelope
 - Along road rights-of-way surrounding the property
- Integrate ongoing management practices to minimize noxious weed infestation:
 - Reclaim disturbed areas to reduce chance of further weed infestation
 - Use weed-free materials in trail maintenance
 - Clean all equipment used in maintenance before it is used on a new project

Wildlife

- Conduct additional mountain plover surveys between May 1 and June 15
- Conduct additional burrowing owl surveys between March 1 and October 31
- Monitor and track the size and density of occupied prairie dog habitat on;
 - Map areas currently occupied by prairie dogs, repeat annually
 - Monitor (count) prairie dog numbers and density annually
 - Review historical aerial photos and map areas of prairie dog occupation
- Avoid disturbance (e.g., grazing and chemical spraying) during the breeding season for grassland birds

Structures and Infrastructure

- Remove all existing outbuildings and windmill
- Maintain fencing as a tool to deter trespass

Visitor Use

- Replace and consolidate signage at the trailhead;
 - Clarify all park regulations including dog leash and waste removal regulations at the trailhead and any new neighborhood connections
 - Assess and repair park signage on a regular basis
- Replace or remove interpretive signage along the trail
- Consider extending trail to neighborhoods in northwest corner of the property, to proactively provide sustainable trail access for new housing residents
- Monitor northwest corner, adjacent to neighborhoods, for inappropriate use (e.g., off-leash dogs, social trails, or dumping) or resource damage

Discussion of Key Issues

Black-Tailed Prairie Dog Management – One of the most important small mammals on the property in terms of its overall abundance, ability to alter habitat, and associated wildlife species is the black-tailed prairie dog (“prairie dog”). Prairie dogs maintain a shortgrass vegetation community that is home to numerous species. Prairie dogs also provide reliable year-round food resources for both mammalian and avian predators.

In 2001, prairie dogs occupied the bowl in the southeastern corner of the property. Both the 2001 Baseline Inventory and 2002 Master Plan for Bluestem Prairie documented the prairie dogs and their importance. Management provisions for monitoring the prairie dogs, species legal status, and presence of other species (e.g., burrowing owl) were provided in the 2002 Master Plan. The 2002 Master Plan also suggested that occupied prairie dog habitat should remain separate and buffered from the footpath proposed along the edge of the property bordering the Big Johnson Reservoir. Both the 2001 Baseline Inventory and 2002 Master Plan were incorporated by reference into the 2003 Deed of Conservation Easement, Section D and E.

D. The specific Conservation Values of the Property are documented in an inventory or relevant features of the Property ("Baseline Documentation"), which consists of reports, maps, photographs, and other documentation that provides an accurate representation of the Property at the time of this grant and which is intended to serve as an objective information baseline for monitoring compliance with the terms of this grant. The Baseline Documentation is attached to and shall be incorporated into this Deed of Conservation Easement.

E. Granter intends that the Conservation Values of the Property be preserved and maintained in a manner consistent with the Big Johnson Master/ Management Plan and through consistent land use patterns including, without limitation, those uses existing at the time of this Easement grant which do not significantly impair or interfere with those values.

Between 2001 and 2007, the occupied prairie dog habitat apparently expanded rapidly throughout the property. Then, the prairie dogs were all but wiped out due to a plague outbreak in 2007. The El Paso

County Department of Health and Environment's public health lab confirmed that fleas collected from property tested positive for plague and dusted the insides of prairie dog mounds with an insecticide to kill all potentially plague-positive fleas. The expansion and plague outbreak, along with the importance of prairie dogs and their habitat, was documented in the 2008-2013 Bluestem Prairie Open Space Stewardship Plan.

The 2014 monitoring report described degradation of property due to prairie dogs, which "cover the entire south and east portions of the property, and are rapidly colonized [sp] large portions of the northwest part (were not there last year)." ERO did not observe these conditions in September 2015, but plans to return to the property for further observations. A review of the 2015 monitoring report when completed could also provide additional details.

At present, there does not appear to be a mechanism under the terms of the Deed of Conservation Easement to manage (i.e., exterminate) prairie dogs. As previously documented, prairie dogs and their habitat are specifically highlighted in the establishing documents for Bluestem Prairie Open Space. In addition, it is important to note that although the 2014 Monitoring Report described the potential dispersal of prairie dogs from Bluestem Prairie to adjacent properties, it is not the responsibility of the Parks, Recreation, & Cultural Services Department or any party to contain prairie dogs on their property. A significant amount of occupied prairie dog habitat also occurs on the Fountain Valley Irrigation Company's property adjacent to Big Johnson Reservoir.

The preliminary management recommendations listed above attempt to address prairie dogs as a potential management issue by initiating and formalizing an objective decision-making process. By evaluating historic colony boundaries and completing mapping of occupied habitat on an annual basis, the Parks, Recreation, & Cultural Services Department would establish objective baseline information upon which to base management actions. The baseline information would not only document the expansion (and contraction) of the occupied prairie dog habitat, but also the use of occupied habitat by other species. For example, ERO observed three western burrowing owls within occupied prairie dog habitat in September 2015.

The combination of previous ground disturbance by prairie dogs and significant precipitation in the spring and into the summer (2015) created an ideal situation for the germination and establishment of annual weeds, especially kochia and Russian thistle. It should be noted that in areas of occupied prairie dog habitat and along the recreation trail margins, the vegetation appeared healthier. This observation is consistent with the clipping action of prairie dogs and mowing operations that keep annual weeds at bay. Additional areas of grassland could potentially benefit from such mowing operations (see below); however, such areas would have to be strategically located away from occupied prairie dog habitat as to not facilitate animal dispersal.

The above supports the rationale of the overarching preliminary management strategy to, "monitor and track the size and density of occupied prairie dog habitat." With the tracking of population and habitat use trends, additional management strategies could be developed in the future if deemed both necessary and in compliance with the establishing documents for Bluestem Prairie Open Space.

Grassland Management – Historically, grasslands co-evolved with various disturbance regimes such as fire and large-scale grazing. Fires worked at the landscape level and faced very few impediments. Large numbers of bison, pronghorn, and black-tailed prairie dogs roamed freely across the vast grasslands, in search of plentiful forage. On Bluestem Prairie Open Space, a relatively small site in an increasingly urbanized setting, prescribed burning and maybe even grazing are not practical. Therefore, some discrete mowing may need to be considered over the long term to retain plant vigor and diversity.

If used judiciously, mowing can act as a substitute for burning or grazing. A flail or mulching mower leaves the prairie looking tidy and makes the dead stems and leaves easier to break down. Mowing should be conducted in random patches and infrequently (once a year at most), except in the first couple of years when controlling weeds as discussed below. Mowing more frequently or along trails will, over the long term, favor annual weeds and kill native warm season grasses. Mowing should also be conducted with potential nesting songbirds in mind.

Annual weeds (e.g., kochia and Russian thistle) should be controlled by mowing before seed production. Mowing is most effective by using a tractor-mounted rotary or flail mower that mulches the cuttings. The blades should be adjusted to about 5 inches from the ground surface so as to avoid cutting most prairie seedlings as they become established. At some level, native grasses are recovering at Bluestem Prairie Open Space and mowing may be needed every few weeks in the first 2 or 3 years in selected locations. Initially, such frequent mowing is possible, as the prairie plants do not show much aboveground growth, preferring instead to put down a deep, extensive root system to help them survive in the long term. Either way, plant response should be closely monitored. After three or four years, the native grasses should be well-established and it is important to allow them to go to seed. As the grassland fills in and the amount of bare soil is reduced, annual weed populations should decline significantly. Keeping annual weeds under control will reduce competition with the native species, especially in the crucial first years. Annual weed populations decline substantially over time as the cover of native grasses increases. Control of annual weeds also will help Bluestem Prairie Open Space from becoming an eyesore to the neighborhood or a weed source to adjacent properties.